Application No.: 10/506,547

Attorney Docket No.: Q68919

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. to 12. (canceled).

13. (currently amended): A vapor phase process for producing a titanium oxide

comprising:

preliminarily heating each of a titanium halogenide-containing gas and a-an oxidative gas

at a temperature of at least 600°C but less than 1,100°C before introducing the titanium

halogenide-containing gas and the oxidative gas into a reactor

reacting the titanium halogenide-containing gas with the oxidative gas by introducing the

titanium halogenide-containing gas and the oxidative gas into the reactor, to thereby allow

reaction to proceed, with the temperature of the interior of the reactor being 900°C to less than

1,000°Cat least 800°C but less than 1,100°C, and

maintaining a residence time of the titanium halogenide-containing gas and the oxidative

gas in the reactor at temperature range of at least 800°C but less than 1100°C 900°C to less than

1,000°C of 0.1 seconds or less.

14. (previously presented): A process for producing a titanium oxide according to

claim 13, wherein reaction is performed by use of a raw material gas mixture containing titanium

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halogenide and an inert gas at a ratio of 1:0.1 - 20 by mol, and also by use of an oxidative gas

whose amount is 1 to 30 mol on the basis of 1 mol of the titanium halogenide.

15. (previously presented): A process for producing a titanium oxide according to

claim 13, wherein the oxidative gas is an oxygen gas containing water steam.

16. (original): A process for producing a titanium oxide according to claim 15,

wherein the oxidative gas contains steam in an amount of at least 0.1 mol per 1 mol of an oxygen

gas.

17. (previously presented): A process for producing a titanium oxide according to

claim 13, wherein said titanium halogenide is titanium tetrachloride.

18. (currently amended): A vapor phase process for producing a titanium oxide

comprising:

reacting a titanium halogenide-containing gas with an oxidative gas by introducing the

titanium halogenide-containing gas and the oxidative gas into a reactor, to thereby allow reaction

to proceed, with the temperature of the interior of the reactor being 900°C to less than 1,000°Cat

least 800°C but less than 1,100°C,

maintaining a residence time of the titanium halogenide-containing gas and the oxidative

gas in the reactor at temperature range of 900°C to less than 1,000°Cat least 800°C but less than

1100°C of 0.1 seconds or less to obtain a titanium oxide, and

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further comprising dehalogenating the obtained titanium oxide by means of a dry dehalogenation method.

19. (original): A process for producing a titanium oxide according to claim 18, wherein, in the dry dehalogenation method, titanium oxide is heated to 200 to 500°C.

- 20. (original): A process for producing a titanium oxide according to claim 18, wherein, in the dry dehalogenation method, a steam-containing gas is heated to 200 to 1,000°C, and is brought into contact with titanium oxide.
- 21. (original): A process for producing a titanium oxide according to claim 20, wherein the steam-containing gas is air containing steam in an amount of at least 0.1 vol.%.
- 22. (original): A process for producing a titanium oxide according to claim 20, wherein the ratio by mass of the steam to the titanium oxide is at least 0.01.
- 23. (currently amended): A vapor phase process for producing a titanium oxide comprising:

reacting a titanium halogenide-containing gas with an oxidative gas by introducing the titanium halogenide-containing gas and the oxidative gas into a reactor, to thereby allow reaction to proceed, with the temperature of the interior of the reactor being 900°C to less than 1,000°C at less than 1,100°C,

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maintaining a residence time of the titanium halogenide-containing gas and the oxidative

gas in the reactor at temperature range of 900°C to less than 1,000°C at least 800°C but less than

1100°C of 0.1 seconds or less to obtain a titanium oxide, and

further comprising dehalogenating the obtained titanium oxide by means of a wet

dechlorination method, to thereby yield a slurry containing a titanium oxide.

24. (original): A process for producing a titanium oxide according to claim 23,

wherein, in the wet dehalogenation method, titanium oxide is suspended in water, and chlorine

which is transferred to a liquid phase is discharged to the outside of the resultant suspension.

25. (original): A process for producing a titanium oxide according to claim 23 or 24,

wherein, in the wet dehalogenation method, separation of chlorine is performed by use of an

ultrafiltration membrane.

26. (original): A process for producing a titanium oxide according to claim 23 or 24,

wherein, in the wet dehalogenation method, separation of chlorine is performed by use of a

reverse osmosis membrane.

27. (original): A process for producing a titanium oxide according to claim 23 or 24,

wherein, in the wet dechlorination method, separation of chloride is performed by use of a filter

press.

28. to 36. (canceled).

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37. (new): The process according to claim 13, wherein the residence time is 0.005 seconds to 0.1 seconds.

- 38. (new): The process according to claim 18, wherein the residence time is 0.005 seconds to 0.1 seconds.
- 39. (new): The process according to claim 23, wherein the residence time is 0.005 seconds to 0.1 seconds.
- 40. (new): The process according to claim 13, wherein the residence time is 0.01 to 0.05 seconds.
- 41. (new): The process according to claim 18, wherein the residence time is 0.01 to 0.05 seconds.
- 42. (new): The process according to claim 23, wherein the residence time is 0.01 to 0.05 seconds.